

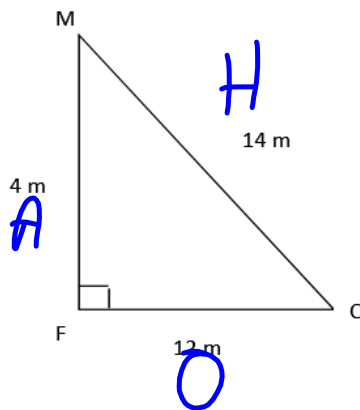
MCF3M 2015

Name \_\_\_\_\_

Trig Quiz 1 - Practice

Expectation	Level Achieved
C1 - solve problems involving trigonometry in acute triangles using the sine law and the cosine law, including problems arising from real-world applications;	

1. State the three primary trigonometric ratios of angle M.

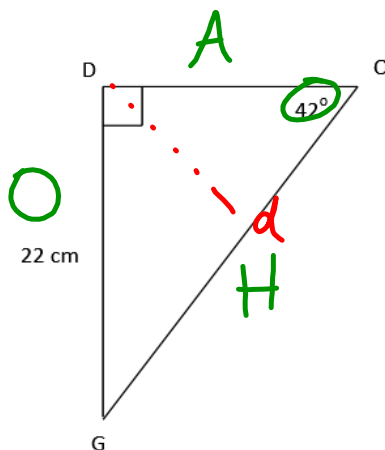


$$\sin M = \frac{12}{14} = \frac{6}{7}$$

$$\cos M = \frac{4}{14} = \frac{2}{7}$$

$$\tan M = \frac{12}{4} = 3$$

2. Find the length of side  $d$ . Round your answer to the nearest tenth.



SỐN CẢN TỐA

$$\sin 42^\circ = \frac{22}{d}$$

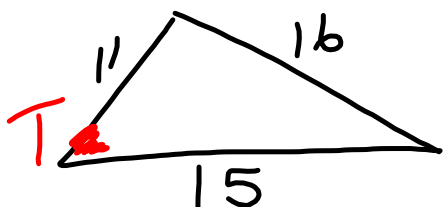
$$d = \frac{22}{\sin 42^\circ}$$

$$d = 32.9 \text{ cm}$$

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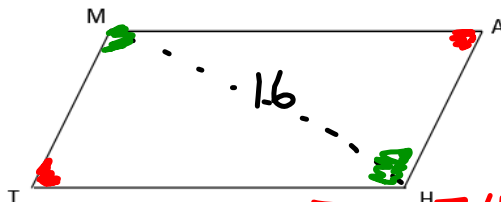
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3. Two sides of a parallelogram MATH measure 11 cm and 15 cm. The diagonal from M to H is 16 cm long. Calculate all the interior angles of the parallelogram to the nearest degree.



$$\cos T = \frac{15^2 + 11^2 - 16^2}{2(15)(11)}$$

$$T = 74^\circ$$



$$360 - 74 - 74 = 212$$

$$M = H = \frac{212}{2} = 106^\circ$$

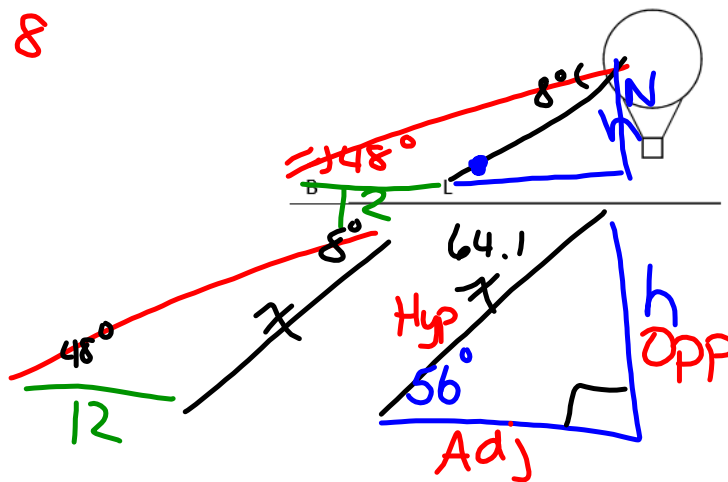
4. Bruce and Lauren are watching Nico take a ride in a hot air balloon. Bruce and Lauren are standing 12 m apart. The angle of elevation from Bruce to the balloon is ~~48°~~. Nico estimates that the angle of view from Bruce to Lauren is 8°. Determine the height of the hot air balloon to the nearest tenth of a metre.

$$L = 180 - 48 - 8$$

$$= 124^\circ$$

$$\angle = 180 - 124$$

$$= 56^\circ$$



$$\frac{x}{\sin 48^\circ} = \frac{12}{\sin 8^\circ}$$

$$x = \frac{12 \sin 48^\circ}{\sin 8^\circ}$$

$$x = 64.1 \text{ m}$$

$$\sin 56^\circ = \frac{h}{64.1}$$

$$64.1 \sin 56^\circ = h$$

$$53 \text{ m} = h$$